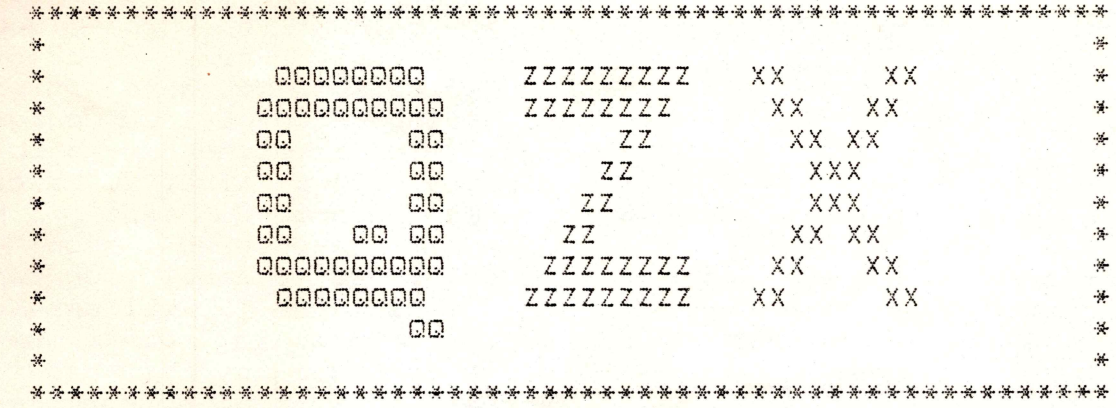
QQQQQQQQ ZZZZZZZZZ XX XX
QQQQQQQQQQ ZZZZZZZZ XX XX
QQ QQ ZZ XX XX
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The Journal Covering Amateur Radio & Sinclair Computers
ZX-80, Micro Ace, ZX-81, & Timex Sinclair 1000
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Alex F. Burr,K5XY
Publisher

Ambrose 'Bo' Barry,W4GHV/5
Editor

IN THIS ISSUE

Volume 1 Number 4 ($1.50/issue) March 1983

* Contest Dupe Program, Paul-KB4PY & Gene-WB4NLM
* S A S - Size, Accuracy & Speed by Bo Barry, W4GHV
* Back Issues & Tapes, K5XY & W4GHV
* Editor's Doings, W4GHV
* Battery-backup circuit & Entrycheck Routine, W6AMW
* ZX-81 RTTY Receive Program, WA0MRG
* Unclassified Ads
* Products in Review
* QZX Friends
* QZX Net Info
* Hints & Kinks becomes Bits & Bytes (no input this mo.)

FLASH
Burnt Pizza Spoils QZX!
Details Inside

Coming in April (soon)

* Net Control Program (Updated)
* DX Antenna Heading Program, W1EFK
* MUF Program, K3NN

Superduper

Here's a nice program to keep track of your contest contacts to avoid contacts with dopes, or is it dupes? It's complete with comments and note the neat credit line at the end. I like their company name. Many TNX for the contribution.

*** WB4NLM & KB4PY ***

"SUPERDUPER" Call Sign Dupe Program for ZX81/Sinclair 1000

```
 5 REM "SUPERDUPER"
10 PRINT "ENTER M (>400)"
15 INPUT M
20 DIM A$(M,6)
25 FOR I = 1 TO M
30 LET A$(I,1) = "*"
35 NEXT I
40 CLS
45 PRINT "INPUT CALL (+ SPACES FOR 6)"
50 INPUT I$
55 IF I$ = "0" THEN GOTO 300
60 IF I$ = "." THEN GOTO 400
65 IF I$ = "L" THEN STOP
70 IF I$ = "" THEN GOTO 40
75 LET H = 0
80 LET K = LEN(I$)
85 FOR J = 1 TO K
90 LET H = H + CODE(I$(J))
95 NEXT J
100 IF A$(H,1) = "*" THEN GOTO 110
105 GOTO 170
110 CLS
115 PRINT I$; " IS A GOOD CALL"
120 PRINT
125 PRINT "WORKED? ENTER Y OR N"
130 INPUT S$
135 CLS
140 IF S$ = "N" THEN GOTO 45
145 LET A$(H) = I$
150 PRINT I$;" IS OK"
155 PRINT
160 PRINT
165 GOTO 45
170 IF A$(H) = I$ THEN GOTO 190
175 LET H = H + 1
180 IF A$(H) = I$ THEN GOTO 190
185 GOTO 100
190 CLS
195 PRINT I$; " IS A DUPE CALL"
200 PRINT
205 PRINT
210 GOTO 45
300 FOR I = 140 TO M
305 SLOW
310 SCROLL
315 PRINT A$(I)
320 NEXT I
325 FAST
330 GOTO 40
400 SAVE "SUPERDUPER"
405 GOTO 40
```

Enter size memory up to 1024, CODE I$(J) will add up to about 375, so try 500 for M to start.

Saves M memory locations for call signs.

Reminder to add spaces for less than 6 letter call.

Prints memory contents by scroll.

Permits a save on tape

Can continue by CONT.

Prevents loss of run if NEWLINE hit before call entered.

Assigns numerical value to call.

Good call, waits to work it.

Looks for empty memory or call sign if a dupe.

If not worked, erases call and starts over.

Enters worked call in memory location H.

Checks if dupe call in H.

If not, checks H + 1 for dupe.

Keeps looking for empty H or dupe call.

Routine to print out memory contents by scrolling up screen. (May take long time.)

After each save you might have trouble with inverse R.

Be sure to SAVE program before RUN otherwise tape will be long. Any saves after running will have long tape due to the array being filled with "*". Note initial SAVE should be by SAVE "SUPERDUPER", not by GOTO 400 due to possible trouble with inverse R.

12/10/82 by MONKEY BROS. COMPUTERWARE (MBC).
(WB4NLM & KB4PY)

KB4PY is Paul Hoffmann
WB4NLM is Gale Leys

S A S

Size-Accuracy-Speed

This is the third installment of a 'column' in which I had hoped to enlist some (LOTS) of participation. We have not received any feedback on either program to date! To compound my problem of limited spare time, I accidently erased the program tape! I hope to have it re-entered soon! Never, never forget to label your tapes!

This month I will provide the modifications to do a Recursive Quick Sort. I haven't had time to actually try it on my computer. Let me know if you try it and I will do my best to work on its SAS and report next time.

Here's the required mods to January's sort:

```
  5 REM RECURSIVE SHELL SORT DEMO
  10  REM ON A TRS-80 IT TAKES
  11  REM ABOUT 18 SECONDS (RAND)
  12  REM AND 11 SECONDS(ARRAY)
```

Delete lines 240- 355.

Leave lines 100-230 (Jan. issue)

Add lines:

```
  121 DIM L(20)
  122 DIM H(20)
  123 DIM II(20)
  240 LET N=0
  250 GOSUB 400
```

Leave lines 357-1550(Jan. issue)

Add lines:

```
  400 LET S=1
  410 LET L(1)=1
  420 LET H(1)=N
  430 IF L(S)>=H(S) THEN 680
  440 LET M=INT((L(S)+H(S))/2)
  450 LET X=D(M)
  460 LET I=L(S)
  470 LET J=H(S)
  480 IF D(I)>=X THEN 510
  490 LET I=I+1
  500 GOTO 480
  510 IF D(J)<=X THEN 540
  520 LET J=J-1
  530 GOTO 510
  540 LET COMPARE=COMPARE + 1
  550 IF I>J THEN 620
  560 LET SWAP=SWAP + 1
  570 LET T=D(I)
  580 LET D(I)=D(J)
  590 LET D(J)=T
  600 LET I=I+1
  610 LET J=J-1
  620 IF I<=J THEN 480
  630 LET II(S)=I
  640 LET S=S+1
  650 LET L(S)=II(S-1)
  660 LET H(S)=H(S-1)
```

```
670 GOSUB 430
680 LET S=S-1
690 RETURN
```

I hope I don't create any enemies with this UNTESTED program. I do plan to try all three in the near future. I am not an expert on sort routines, so you are on your own to find out more about quick sorts and recursive programming. Note that this sort subroutine calls ITSELF, a rather unusual way of doing things. I sure hope it works! The last one I have, for next month, is a 'normal' quick sort. Then perhaps, with some external input (from YOU ALL) we can start to develop improvements to them. Development of machine language portions may prove interesting.

*** Bo Barry-W4GHV ***

Back Issues & Tapes

Back issues of the original QZX are available from K2MI. See info in the unclassified ads (Jan 83 issue). When he runs out, we will probably collect these issues in a book; but don't hold your breath waiting for us. Order from Marty before he runs out (and to help him run out).

We are getting requests for back issues of the 'new' QZX and for back dated subscriptions. In order to keep our costs down, we have printed only enough for our subscribers, advertizers, and a FEW extra. Neither of us live in large houses where we can store back issues waiting for people to ask for them! It is time consuming and expensive to reproduce, address and mail ONE back issue, so we are investigating other means of making older information available. Meanwhile, subscribe now and don't let your subscription lapse.

Realizing our print quality still has a way to go, and that some of the better programs submitted are rather long to type in, we are planning to offer the programs on tape. The DX heading program in this issue is a good example. We have considered a Z-Dubber which I think reconstructs the playback waveform allowing not only easier loading into the computer but also allows recorder to recorder copying. If it is similiar to the one I use on my TRS-80, it will work fine. Earlier attempts of duping tapes were short-lived. The copies did not load well. A lot of time was spent trying different techinques using a scope to observe what was being recorded and the playback. The results were disappointing. A lot of problems were experienced with expensive tapes I had on hand, and I discarded all of them in favor of the ones sold by Microsette. (Look for their ads in the magazines) I have ALWAYS had perfect results with them, using them often in my BASIC classes in the TRS80 tape days!

If this gadget works, and if I can hire my kids at 'minimum wage', we will have them take on this task. This service should be fairly economical if we can talk the kids into doing it. There is no way we (Pub. & Ed.) could find time to LOAD and SAVE programs all day! Details later..

*** K5XY & W4GHV/5 ***

Editor's Doings

Here's a mish-mash (is that spelled rite?) of what I have been doing in between the sessions spent on my TRS80 preparing this newsletter. 1... The M-64 64K memory board was completed without a hitch. (see review) 2... My ZX81 was 'modified' for direct video output. I thought it took more than just a wire, judging from all the expensive kits advertised, but it works fine into a video arcade BW 19" TV 'pullout' one of my students is trying to peddle. I hope he didn't 'pull it' as a result of being beaten at Pacman! It's kinda neat to see the ZX81 in action on a 19" screen. 3... Another big improvement came about with the addition of a $20 keyboard from Jameco Electronics. It was brand new without a PC board and I used a neat Vector tool containing very fine wire to connect up the key matrix (following the details published in our first issue no less). The wire's insulation melts during soldering, eliminating a lot of wire cutting and stripping. This technique needs some improvement, perhaps some rosin added to help the iron burn the insulation. After a little debugging I had it working fine. Now to get labels on the keys and to figure out

how to get arrows, a comma, etc without using the shift key. 4...Now on to the big news. A friend loaned me the Sinclair Bomber/Invader game tape and the bomber game has everyone addicted. My top score is a little over 200 but my daughter has a score of 386! Has anyone tried it or beat her score? All attempts to make a backup copy of that one have failed. 5...The 16K board that my students layed out and built finally was debugged and made to work. We tried the 'funny' way of getting the 3 voltages required, as shown in the Sinclair version, but could not get quite enough output. Conventional power supplies were built. We have the negatives (double-sided) and thought about selling boards, but doubt if time will permit. 6...Two of my students are building a VOTRAX speech synthesizer for their ZX81. It has an unlimited vocabulary and is fun to work with. Another is building the National Digi-Talker version described in July '82 R-E magazine and it will be interesting to see how well it performs with its limited vocabulary. See ad in this issue for a commercial version. 7...Another project almost done is the incorporation of a National LM XXXXX with LED barchart display (Jameco Elec. Co. $6.95) for use in monitoring audio levels for tape loading. Hopefully it will help me with my problems. I will report on that one next month. 8...How many of you are interested in interfacing your ZX-81 to another computer? Yes, mom, some of us are nuts enough to have more than one computer! The Dec '82 issue of Kilobaud which I JUST received, has details on hooking to the Heath H8. I plan to take the idea and come up with 2 way data transfer to my TRS-80. Any volunteers or ideas?

By the way, if you have any specific questions or information aimed my way, use my address in the unclassifieds. Alex stays pretty busy with the majority of the 'business' mail and won't mind.

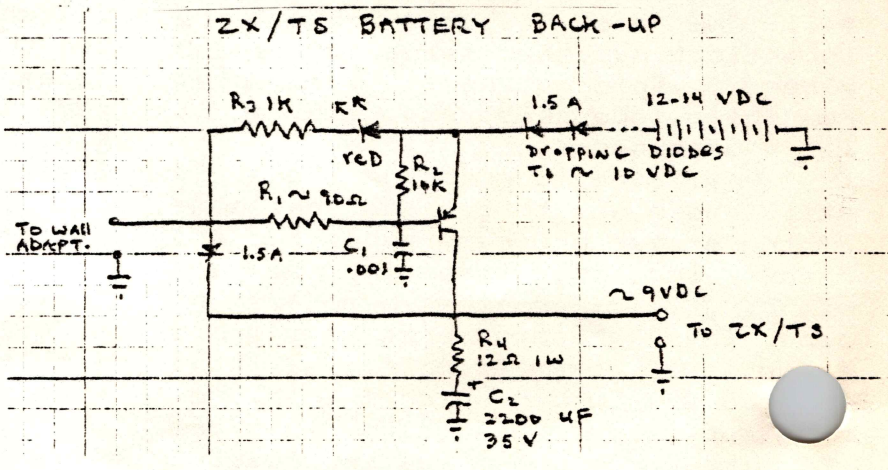
** Bo Barry-W4GHV **

Battery-Backup & Entrycheck

Here is a simple sketch on how you can provide battery backup for your computer. Cost of parts is small, the 2N5193 can be replaced by almost any 3 to 4 amp PNP transistor. Also included is a short routine illustrating the usefullness of the CODE function in devising a 'goof-proof' data entry method. As written, it will accept ONLY positive numbers from 0.0 to 99.9. It will NOT ACCEPT (a) negative numbers, (b) a space (CODE=0), (c) numbers without a decimal point (it will accept a decimal point as a zero entry), (d) any other character than a number or a decimal point or an X, (e) numbers greater than 99.9. The routine is exited by entering an X. You can, of course modify it to suit your needs. Station applications might include logging, calculating satellite orbits from data with a large number of decimal places, etc. It won't keep you from typing in a 'wrong' data entry due to your faulty reading/typing, but it does narrow down the range of possible errors!

*** Bob - W6AMW ***

```
  1 REM "ENTRYCHECK" W6AMW
  10 DIM A$(3,7)
  15 LET A=0
  20 FOR I=1 TO 3
  30 INPUT A$(I)
  35 CLS
  40 PRINT AT 1,0;A$(I)
  50 FOR J=1 TO 5
  55 IF A$(I,J)="X" THEN STOP
  61 IF (CODE A$(I,J)<27 AND COD
E A$(I,J)<>0) OR CODE A$(I,J)>37
 OR (CODE A$(I,J)=27 AND CODE A$
(I,J+2)>27) OR CODE A$(I,5)<>0 O
R CODE A$(I,1)=0 OR CODE A$(I,1)
<>27 AND CODE A$(I,2)<>27 AND CO
DE A$(I,3)<>27 THEN GOTO 63
  62 GOTO 100
  63 PRINT "ERROR:YOU ENTERED ";
A$(I);AT 21,0;"RE-ENTER NOW"
  65 IF CODE A$(I,J)=0 THEN PRIN
T AT 2,18;"0"
  80 LET J=1
  90 GOTO 30
 100 NEXT J
 110 LET J=1
 120 LET A=A+VAL A$(I)
 130 NEXT I
 131 CLS
 160 PRINT "TOTAL=";A
```



ZX-81 RTTY Receive Program

Here's a neat RTTY program that [illegible]es RTTY for you. The author [illegible]erfaced his ZX-81 directly to his home made TU. (I'm assuming TTL signals). He connected his TU to pin 2Ø of IC1 in the ZX81. It is for a 16K machine. Here's details:

This short RTTY receive program overcomes some of the shortcomings like timing problems and limited display found in some other programs. The program is somewhat difficult to load so follow directions closely. First, key in only the first 3 REM statements in the program listed at the end of the article. Then, key in the following short program:

```
1ØØ FOR N=16526 TO 16561
11Ø INPUT M
12Ø POKE N,M
13Ø PRINT N;"="; PEEK(M),
14Ø NEXT N
```

Next, RUN this routine, keying in the following machine code:

```
14,Ø,6,5,219,Ø,2Ø3,127,32,25Ø
22,[illegible]5,3Ø,234,29,32,253,21,32
[illegible]219,Ø,2Ø3,39,2Ø3,17,22,2Ø.
5,[illegible]237,33,Ø,Ø,1Ø5,2Ø1
```

After running this, delete lines 1ØØ-14Ø. Then re-do line 3:

```
 3 REM#T#O#HNM#LRGIPCVEZDBSYFXAWJ
#UQK##5#9#@,.#)4+8Ø:;3""$?#6./-2
""#71(#
```

Note: @ is equal to the pound sign, + is equal to &, "" is the quote image (shifted Q) and is used for both " and the ', and the period following the 6 is used as !.

After the machine code and the translate table are entered and checked, the remainder of the program should be entered. After entering, store on tape, BEFORE running. Then RUN, and after about 26ØØ characters are received, the print out will start. The actual number of characters stored and printed is less than 26ØØ because a 'blank' (bits ØØØØØ) are stored but not printed. To display before 26ØØ characters have passed, press BREAK [illegible]ollowed by GOTO 2ØØ. Because of the S[illegible]L statements, a RUN command may be sluggish. To adjust the speed to get error free copy, POKE a value plus or minus 234 in location 16539. If that doesn't work try POKE 16553,19. This will change the timing loops in the machine code, which is based on that written by W9HLQ.

```
1 REM "RTTY"
2 REM ......... 36 dots for ML
3 REM
4 FAST
5 DIM A(26ØØ) = DIM A$(2600)
6 LET Z=Ø
9 LET J=Ø
9Ø FOR N=1 TO 26ØØ
1ØØ LET Z=USR 16526
11Ø IF Z=Ø THEN NEXT N OR Z=32 THEN GOTO 100
12Ø IF Z=4 THEN LET J=Ø
13Ø IF Z=27 THEN GOTO 16Ø
14Ø IF Z=31 THEN GOTO 18Ø
15Ø LET A$(N)=(Z+J) A$(N)=CHR$(PEEK(16568+Z+J))
16Ø IF Z=27 THEN LET J=32
17Ø NEXT N GOTO 100
18Ø LET J=Ø
19Ø NEXT N
2ØØ SLOW
21Ø LET B= 1
22Ø SCROLL
23Ø FOR N=1 TO 26ØØ
24Ø IF A(N)=Ø OR A(N)=32 THEN
      GOTO 24Ø PRINT A$(N)
25Ø PRINT CHR$ (PEEK (16568+
     A(N)));
26Ø LET B=B+1
27Ø IF B=31 THEN SCROLL
28Ø IF B=31 THEN LET B=Ø
29Ø NEXT N
```

Let us know how it works out.

* Dallas Williams - WAØMRG *

Unclassified

WANTED: Subscribers for the fastest growing newsletter for Sinclair computer/radio amateurs. Subscription cost is only $12 for 12 guaranteed issues. Send to address below.

WANTED: Unclassified ads for publication in QZX. Cost is 1 cent for each keystroke (characters, blanks, etc). Payment must be included with order. This is an excellent way to sell your unwanted equipment, ask for help, find a specific program, etc. Send your ad in with payment to QZX, 2Ø25 O'Donnell, Las Cruces, N.M. 88ØØ1.

FOR-SALE: Mailing labels with addresses of Sinclair/Timex hardware/software suppliers. Over 12Ø addresses for $1.2Ø + SASE (business size) with 54 cents

postage. Same deal for labels with YOUR address on them. W4GHV, 1967 Defiance Ave.,Las Cruces, N.Mex.,88001.

FOR-SALE: FOURIER Analysis & Synthesis. User defined resolution, number of harmonics, full data review, graphing facilities, written for ZX81 but easily converted to ZX80 (no multi-dim arrays). Listing and full docs $12.00 ppd. Mention QZX and get the $5 cassette free. SYNCWARE Co., POB 5177, El Monte, Ca 91734.

WANTED: Ideas or plans for using Sinclair or Timex computer as memory bank for ham HF frequencies, scan optional, power in - power out display, whatever? W6FGE, 940 Temple St., San Diego, Calif. 92106

Products in Review

This column will provide reviews of hardware 'add-ons', software, and books that are available for the Sinclair computers. Again, we will do reviews as our budget allows, or as they are loaned/donated by vendors for review. Reviews done by our subscribers will also be welcomed.

First, lets discuss the Byte Back Co. M-64 64K memory board. I purchased it as a blank board ($19.95+4.95 post) and stuffed it myself. It is also available in kit form or ready-made. The board is well made, the design is fairly straightforward, and completion of it was a snap. It consists of 8 64K memory chips, 9 other ICs, a 5 volt voltage regulator and a few parts. The RAS, CAS, MUX timing problems usually critical with dynamic RAMs are handled very simply on this board, using three R-C timing delays. I had to add together 3 resistors to come up with the required 274 ohm and 453 ohm resistors. If you build one, watch carefully the IC part numbers, use LS chips where specified and S chips where called for. Their propagation delays are different and were probably taken into consideration in this design. I'm not familiar with the newer 64K chips yet, but I was pleasantly surprised to see that they only require +5 volts! The M-64 uses Motorola MCM6665's which have a pin for refresh, but it isn't used here. The MCM6664 or 4164's as they are advertised will work as well, I'm told. Their price is down to $4.65 (from Chips & Dale Co.), so taking this approach costs about $70 + a connector and case of your choice. I plan to cut some double sided PC board to size and solder together a nice case. I was pleased to see no detectable TVI problems with the bare board in operation.

In operation, the board 'comes up' as a 16K add-on memory. By poking 255 in location 16389, you now have 16K for your BASIC program, and 32K for arrays and variables. 8K of memory, just above the BASIC ROM is available for machine language routines and traces can be cut to eliminate 2K blocks of this RAM in case it conflicts with other add-ons. For you beginners that have been adding all this up, NO we don't use all of the 64K memory locations in the 64K RAMS, the lower 8K 'stay on vacation' since the BASIC ROM eats up that space. Anyhow, 16K for a single BASIC program with 32K for variables and data gives an awful lot of power to the Sinclair! Instructions are given on how to load normal 16K programs and then enlarge the array space to allow full use of the M-64. In summary, I am well pleased with it, and highly recommend it. The kit and assembled prices are competitive for those not interested in stuffing a blank board. My next projects are construction of their RS-232 and MODEM boards. ($19.95 ea or both for $29.95). Then I'll have a rather small and economical smart terminal.

Next, we have some book reviews from George Allen, N1BEP. The Timex Sinclair Users Guide Volume I, by Joseph Giamantano, Que Corp., 7960 Castleway Drive, Indianapolis, Ind. 46250 (227 pgs, $9.95) is a good adjunct to the ZX81 BASIC programming booklet supplied by Sinclair. It goes into more detail and spells out for beginners many of the tricks to get the machine operating without all the trial and error. Sections on debugging, errors, tests and decisions are more detailed, as is information about getting out of loops, and a way to

get back to KEYWORD. An appendix also lists articles of interest from Sync and Syntax magazines through Aug 1982. Volume II to be released s[illegible] promises more information on a[illegible]nced commands, checkbook keeping, graphics, video games, and an introduction to machine language. P.S. George left out his opinion of this one. Sounds good to me though.

The next two books were written by English authors, originally published in the U.K. The ZX81 Pocket Book, by Trevor Toms, Reston Pub. Co., Reston, Va. (128 pgs, $10.95) uses nine programs to illustrate a number of advanced techniques - searching strings, efficient programming, large characters, digital clock (for 50 Hertz) (change the constant 5.12 to 4.265 for 60 Hertz), decimal justification, and excellent information on alternative ways of entering machine language. (I knew I should have read it closer; I never did get the silly clock to keep good time..Ed.) The book contains a long Adventure program which is fun and al[illegible] illustrates many of the ideas. S[illegible] are given on how to create yo[illegible] own adventure. If you dislike typical 'shooting games' but enjoy a mind challenging experience you MUST try 'adventure - type' games! Some info on ZX80/ZX81 conversions are given. It contains a lot of hints on program size & execution speed in the form of short 'benchmark' programs. The actual execution times were supposed to be listed in the back of the book, but are missing! George & I both agree that it is an excellent value.

Byteing Deeper into your Timex Sinclair 1000, by Mark Harrison, John Wiley & Sons, 605 Third Ave., N.Y., N.Y., 10158 (159 pgs, $10.95) starts at the beginning also, but goes farther. A chapter on statements with examples on loop nesting, data bank, alphabetical sorting, graphing, memory detail, and machine code. Recovery from crashing, debugging techniques, and so[illegible] notes on other BASIC dialects a[illegible]aluable. Some games are used to il[illegible]strate technique. George says this one is good also, but you can't buy them all! This brings up an important point. There are LOTs of people out there trying to make a buck off of Clive's invention. Since most of us have a FINITE amount of money to spend on this neat hobby, we must somehow keep from 'blowing it' on lousy books or software and/or hardware gadgets that don't work or are overpriced. Send your experiences in, and we will publish them. I have seen more lousy than good books in my days, but must admit that almost all I have encountered for the Sinclair have been GOOD (so far).

Here's a nice review of the CWSS program/hardware project. You will recall that it was developed by NU4V, see Alex's comments about it in a previous QZX. Russ Parker - W9CQD bought one, put it together, and sent us this nice report.

For an all around economical, straight forward, and versatile computerized CW mode you can't beat Cliff Nunnery, NU4V's CWSS program and interface. (No fair giving away your conclusion before telling the story Ed..). I obtained the software and PC boards from NU4V and the parts from WD4HDT, all being delivered within a week. The boards went together in easy fashion. The main thing is to make good solder connections and make sure there are no solder bridges. The beginner should exercise care and caution here. Take your time. It will pay off in the end result. More experienced builders already know this.

The interface plugs into the back of the ZX81 and the 16K RAM plugs into the interface. The interface is tested initially without the IC's in place. If you get a cursor in a few seconds the interface should be operative. Disconnect, plug in the IC's and reconnect. Connect the speaker and key cable, load the program, run it and watch the screen. (C'mon Russ, what else is there to watch? Ed..) Upon running, the monitor will be in the receive mode. Random signals will cause letters to appear. Estimate the speed of the received CW and set the WPM accordingly. Tune across the signal slowly and at some point the letters will start printing, hopefully without errors. The interface seems to be tone conscious enabling it to settle on one signal effectively. QRM & QRN

will cause the readout to put in some false letters. You will also find it works best on keyboard sent CW. (Don't we all..Ed.) For sending, simply change modes according to instructions and type your message on the keyboard. The program provides for putting ten canned messages in the memory to be called up with a touch of a key.

For a first-time-user of computer CW you will marvel at the capability of the program. Building the interface yourself will give you a great deal of satisfaction in taking some part in the undertaking. Cliff deserves a pat on the back for bringing this outstanding program to the ZX ham fraternity. This will show you what a real giant this computer is. (How about a scoreboard for the longest and fastest error-free CWSS contact? Ed.)

QZX Friends

Here's your chance to let your ambitions and accomplishments be known. Feel free to let us know what you are up to, and to contact those 'doing your thing'.

WD8OUM - Ellie has a new Timex 1000 with 16K and is buying books like mad. (Me too. Let us know your opinions of them..Ed.) She is a 5 year ham and a grandmother that has to keep the cookie jar full so she can find time to write programs.

WA3OHN - Dennis sent a request for RTTY info, and even sent $ to cover our costs. (very much appreciated)

W2EWE runs a good 2 meter net for Sinclair computers on 146.17 in NYC and I (K5XY) was able to check into it at the end of Jan (when he should have been helping the editor) and was made to feel very welcome. Lots of good info is available there.

NØDHB - Dutch works for the Pueblo, Colo Health Dept as a biologist. I (K5XY) had a nice visit via 2 meters with him last month (goofing off some more). Dutch also has a VIC 20 on CW & RTTY.

***** - Fred Nachbaur, the owner of Syncware Co sent a nice letter and an unclassified ad. He is compiling a mailing of a few short technical programs and is offering it free if you send a SASE. (Sorry I gave you ** for your call letters, not everyone has to be a ham I guess. Ed.)

WB4TDB - Vollie gave us a new name for Hints & Kinks, but we didn't get and input for the column! He is 'retarded AF' like me. I can't believe he gave up a noisy TRS80 for a quiet ZX81!

QZX Net Info

First, Russ's input.

I know they are out there, but I am not copying them regularly in the Midwest. The propagation on twenty is taking its toll here. I hear it has been averaging twenty or so check-ins per session, with response as far away as Hawaii. It has good coverage not only in participation, but also in the caliber of knowledge. With the help of WB9NRK, Dale I will try to start a forty meter net. Beginning on Tuesday evening March 22nd at 0100Z, I will call QZX on 7245 kHz for six consecutive weeks. If you do not hear anyone, call QZX yourself to get things rolling. I'm looking forward to meeting more of you on the air. (Sounds like a good idea, maybe my trap vertical will make it.Ed.)

Here's some more from Russ (called a hot flash by him). WA6DLI mentioned there is an Apple Net on 14329 at 1700Z on Sundays. The NCS suggested we come on at 2000Z with a Sinclair net and thereby get a frequency already established. Sounds like a good idea. So, we are going to try to establish a new net in addition to the Tuesday night net. It will be on Sunday afternoon at 2000Z on 14329 kHz. WB7TRQ will turn things over to us. See you there.

*** Russ Parker - W9CQD ***

Other info received: The central west coast 40 meter QZX net has had 5 lively sessions to date. It meets at 1800Z on 7235 kHz every Saturday morning. (from Bob - W6AMW)

Two meter nets: New York City, Mon. 8:30 PM on 146.17/67; Pueblo, Colo. Thur 9 PM code practice by a ZX81 on 145.9 MHz; Wheaton, Md. on 146.88 MHz.

Miscellaneous Comments

Correction: Jan issue, lookeeper program, by WA6DLI, change [illegible] 56 to read 56 Print"Enter S for s[illegible]ch menu" to make it self explanatory when using. Only enter by GOTO 53, never RUN or you will lose your data. To save typing, the program is available for a 16K ZX81 on cassette for $8 PP from the author, Bob Howard, WA6DLI, 750 N. Yaleton Ave., W. Covina, Calif. 91790.

Yep. A price drop came about. I have seen the TS-1000 listed for $75 with a $15 rebate from Timex. Hang on a while longer and it will be as cheap as a calculator. Competition is going to be tough for the TS2000 color about to be introduced. With the VIC-20 down to $139 or lower, I bet the TS2000 goes for $100 or less. By the way, the VIC-20 requires purchase of an expensive tape recorder, your good ol' trusty one won't work.

Program Submission - We are still working hard to improve the print quality of QZX. I'm satisfied [illegible] the content quality - are you? W[illegible] want to apologize for last month's issue.

Would you believe the printing problems were caused by a hot pizza? Yep, the pizza joint next door to the print shop burned up (or is it down?) causing lots of problems. Adios to the two impatient subscribers that demanded a refund, and THANKS to the 398 that are sticking it out. We are constantly trying to come up with a better and economical way to get better printing. The process of XEROXing, shrinking, cut & paste, and XEROXing is not working as well as it should. If you would submit clear listings in a 3.5" by 10" format on white paper we could skip the shrinking and improve resolution. Better yet, submit it (2 copies) on tape and as soon as Alex can find a black ribbon for his printer we will have it licked.

Along that line, we received a short, simple, and nice dipole antenna calculating program from N9AYP, Louis Irvin. It was printed on a thermal printer. It was 'readable' to me, but would not copy worth a flip on any copying machine. So we are unable to provide it in this issue. Also, another nice MUF program was received from KQ2F on a thermal printer. No luck in copying,

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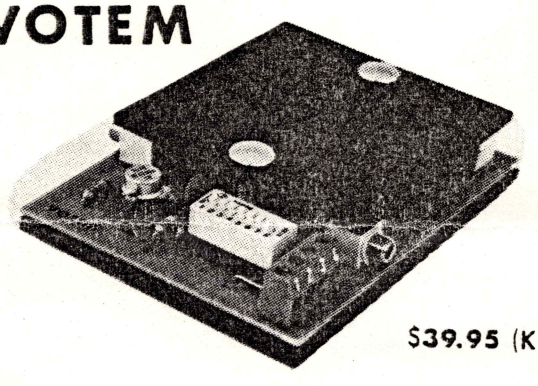

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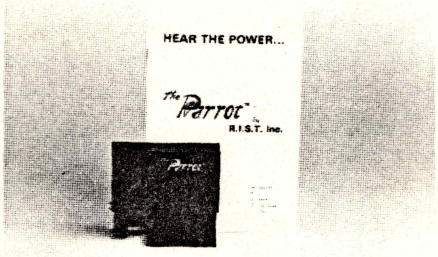

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